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Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 18, 21-24 and 30-32 are pending in the application, with 18 and 30 being the independent claims. Claims 18 and 23 are amended. Claims 1-17, 19, 20 and 25-29 are canceled without disclaimer of or prejudice to the subject matter thereof. New claims 30-32 are added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Examiner Interview of June 5, 2006

Applicants appreciate the Examiner's courtesy extended to Applicants' representative at the personal interview of June 5, 2006. Applicants confirm the content of the interview to have included a discussion of the claims in view of the cited Jeffrey and Jobst patents. In particular, an amendment to claim 18 was discussed that clarified the location of the valve pin in the open position with respect to the nozzle melt channel and the gate passage.

Affirmation of Election in Response to Restriction Requirement

Applicants affirm the election of Group II, claims 18 and 21-24, drawn to a molding method. Accordingly, claims 1-17, 25-27 and 29 have been canceled, without disclaimer of or prejudice to the subject matter thereof, as being drawn to a non-elected invention.

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Rejections under 35 U.S.C. § 102

The Examiner rejected claims 18 and 21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,111,857 to Jeffery. Essentially, the Examiner stated that Jeffery discloses a valve plug, *i.e.*, nozzle valve 80, that functioned similarly to Applicants' recited valve pin.

Applicants respectfully traverse the Examiner's rejection. Applicants have amended independent claim 18 to clarify, *inter alia*, that in an open position the valve pin is positioned outside a nozzle melt channel to allow melt to flow through the gate passage to the mold cavity. In Jeffrey, nozzle valve 80 is positioned within the melt channel of nozzle 71 in both an open (see FIG. 17) and closed (see FIG. 18) position. Accordingly, claim 18 is not anticipated by and is patentable over the Jeffrey patent.

Claim 21 depends from and adds further features to claim 18 and is patentable for this reason alone. While it is not necessary to address the Examiner's rejection of the dependent claim at this time, Applicant reserves the right to support its patentability, when necessary.

Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 22-24 under 35 U.S.C. § 103(a) as being unpatentable over Jeffrey alone or in combination with U.S. Patent No. 2,456,421 to Jobst. With respect to claims 22 and 23, the Examiner stated that the process disclosed in Jeffrey did not show heating the slug to liquefy it sufficiently to permit melt to flow into the gate passage. The Examiner relied on column 2, lines 10-22 of Jobst for this teaching, and found it obvious to combine the teachings of the two references "to eliminate the possibility of blisters and blemishes that may result if leftover cold slug

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material is injected in the subsequent shot." Office Action, pp. 4-5. As for claim 24, the Examiner found it obvious to include a plurality of mold cavities and gate passages fed by a common inlet portion to accommodate specific molding article quantities and characteristics. Office Action, pp 5-6.

Claims 22-24 depend from and add further features to independent claim 18 and are patentable over the Jeffery patent for this reason alone. While it is not necessary to address the Examiner's rejection of the dependent claims at this time, Applicant reserves the right to support their patentability, when necessary.

However, Applicants note that the Jobst patent does not makeup for the deficiencies in the primary reference, and that Jobst teaches a type of valve-gated nozzle that is operational quite different from the claimed invention. The apparatus of Jobst does not form a sealing slug upstream of the cone-shaped valve 34, but instead it is a noted benefit of the Jobst design that the molding material stays fluid in the valve area due to the influence of the heater 26. Jobst patent, col. 4, lines 58-71. Consequently, the reheating in Jobst of "any particles of chilled material remaining" is with respect to those particles left downstream of valve seat 37 once the chilled sprue has been removed, and not as to the reheating of a slug for sealing the nozzle melt passage as in the claimed process. Accordingly, the Jeffery and Jobst patents, alone or in combination, do not teach or suggest Applicants' claimed invention.

New Claims 30-32

New claims 30-32 are directed to a method for controlling melt flow in an injection molding apparatus that includes, *inter alia*, a valve pin that is positioned outside the nozzle melt channel in the open and closed positions. Neither the Jeffrey nor the

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Jobst patents teaches or suggests such an arrangement. Accordingly, claims 30-32 are patentable over the Jeffery and Jobst patents, alone and/or combination. The new claims do not constitute new matter and their allowance is respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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